

Ethylene Oxide

WAC 296-855-500

Definitions

Action level

An airborne concentration of ethylene oxide (EtO) of 0.5 parts per million, calculated as an 8-hour time-weighted average.

Authorized personnel

Individuals specifically permitted by the employer to enter the exposure control area to perform necessary duties, or to observe employee exposure evaluations.

Breathing zone

The space around and in front of an employee's nose and mouth, forming a hemisphere with a 6- to 9-inch radius.

CAS (Chemical Abstract Service) number

CAS numbers are internationally recognized and used on material safety data sheets (MSDSs) and other documents to identify substances. For more information see <http://www.cas.org/about.html>.

Container

Any container, except for pipes or piping systems that contains ethylene oxide. It can be any of the following:

- Barrel
- Bottle
- Can
- Cylinder
- Drum
- Reaction vessel
- Storage tank





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Day

Any part of a calendar day.

Director

The director means the director of the department of labor and industries or their designee.

Emergency

Any event that could or does result in the unexpected significant release of ethylene oxide. Examples of emergencies include equipment failure, container rupture, or control equipment failure.

Ethylene oxide (EtO)

Is an organic chemical represented by the CAS registry number 75-21-8. EtO is a flammable colorless gas and is commonly used to sterilize medical equipment and as a fumigant for certain agricultural products. It is also used as an intermediary in the production of various chemicals such as ethylene glycol, automotive antifreeze, and polyurethane.

Exposure

The contact an employee has with ethylene oxide, whether or not protection is provided by respirators or other personal protective equipment (PPE). Exposure can occur through various routes of entry such as inhalation, ingestion, skin contact, or skin absorption.

Licensed health care professional (LHCP)

An individual whose legally permitted scope of practice allows him or her to provide some or all of the health care services required for medical evaluations.

Permissible exposure limits (PELs)

PELs are employee exposures to toxic substances or harmful physical agents that must not be exceeded. PELs are specified in applicable WISHA rules. The PELs for ethylene oxide (EtO) are:

- 8-hour time-weighted average (TWA₈) of one part per million (ppm)

and

- 15-minute short-term exposure limit (STEL) of 5 ppm.

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Short term exposure limit (STEL)

An exposure limit averaged over a short time period (usually 15 minutes) that must not be exceeded during any part of an employee's workday.

Time-weighted average (TWA₈)

An exposure limit averaged over an 8-hour period that must not be exceeded during an employee's workday.



Notes
